ThinkSystem SR665 V3 Sets 2 World Records with New TPC-E Benchmark Result
Performance Benchmark Result

Lenovo has published a new TPC-E benchmark result that has raised the bar on OLTP database performance. The result has been achieved on the powerful Lenovo ThinkSystem SR665 V3 server. The benchmark results are:

- The world's #1 overall TPC-E result for performance
- The world's best TPC-E result for performance on 2-processor systems

The TPC-E benchmark is designed to enable customers to objectively measure and compare the performance and price of various Online Transaction Processing (OLTP) and database systems.

The ThinkSystem SR665 V3 server achieved the following score (1):

- **15,885.04 tpsE (transactions per second E) @ $80.77 USD/tpsE**

This result is:

- The highest TPC-E performance ever published, 32% faster than the previous generation AMD 2-processor system, with the same number of processor cores (2)
- 12% better price/performance than the previous generation AMD 2-processor system (2)
- The first TPC-E performance result ever to go over 15,000 transactions per second

Including this new result, Lenovo servers have the #1 1P (3,4), 2P (1,5), and overall (1,5) TPC-E performance and price/performance results.

The SR665 V3 achieved this record level of OLTP performance using the following configuration:

- 2x AMD EPYC 9554 64-core processors at 3.1GHz (2 processor, 128 total cores, 256 total threads)
- 3072 GB of Lenovo TruDDR5 memory
- Microsoft SQL Server 2022 Enterprise Edition
- Microsoft Windows Server 2022 Standard Edition

This result also relied on Lenovo Storage D1224 DAS enclosures. Six D1224 storage enclosures and 144 SAS SSDs were used in the benchmark configuration, attached directly to the server using six ThinkSystem RAID 940-8e controllers configured with RAID-5.

Results referenced are current as of May 1, 2024. To view all TPC results, visit www.tpc.org.

(1) The total solution availability for this TPC-E benchmark result is April 30, 2024. See the details for this result at https://tpc.org/4096.

(2) Lenovo ThinkSystem SR665 V3 with two AMD EPYC 7763 64-core processors at 2.45 GHz (2/128/256). Result details are from https://tpc.org/4088.

(3) Lenovo ThinkSystem SR655 V3 with one AMD EPYC 9754 128-core processor at 2.25 GHz (1/128/256) is the #1 1P TPC-E performance result. Result details are from https://tpc.org/4094.

(4) Lenovo ThinkSystem SR655 V3 with one AMD EPYC 9654 96-core processor at 2.4 GHz (1/96/192)) is the #1 1P TPC-E price/performance result. Result details are from https://tpc.org/4093.

(5) The Lenovo ThinkSystem SR665 with two AMD EPYC 72F3 8-core processors at 3.70 GHz (2/16/32) is the #1 overall TPC-E price/performance result and the #1 2P TPC-E price/performance result. Result details are from https://tpc.org/4090.

About the ThinkSystem SR665 V3

The ThinkSystem SR665 V3 is a 2S 2U rack server built with the performance and flexibility to manage a complex set of workloads like data management, analytics, virtualization, cloud, and AI. The 256 cores of the dual 4th Gen AMD EPYC™ processors with up to 160 PCIe lanes and up to 6TB of the latest DDR5 memory, maximize the performance of this 2U server.

The SR665 V3 is designed to support today's infrastructure and easily scale to prepare for next gen workloads. Multiple drive options using SAS/SATA and NVMe with hot-swap capabilities and XClarity system management software enable changes to be made quickly with ease. The versatile design doesn't stop at storage, the SR665 V3 includes support for multiple options for GPU and PCIe to satisfy graphics, speed, and budget requirements.

About the Lenovo Storage D1212 and D1224 Enclosures

The Lenovo Storage D1212 and D1224 Disk Expansion Enclosures offer 12 Gbps SAS direct-attached storage expansion capabilities that are designed to provide simplicity, speed, scalability, security, and high availability for small to large businesses.

The D1212 (with 3.5-inch drives) and D1224 (with 2.5-inch drives), deliver enterprise-class storage technology in a cost-effective solution with flexible drive configurations and RAID or JBOD (non-RAID) host connectivity.

About TPC-E

TPC Benchmark E (TPC-E) is an Online Transaction Processing (OLTP) workload designed to enable customers to objectively measure and compare the performance and price of various OLTP and database systems. TPC-E is a mixture of read-only and update intensive transactions that simulate the activities found in complex OLTP application environments.

Learn more

To learn more about solutions for database and OLTP applications, please contact your Lenovo Sales Representative.

To find out more about TPC, visit https://www.tpc.org.

To learn more about the Lenovo ThinkSystem SR665 V3 server, visit the SR665 V3 product web page: https://www.lenovo.com/us/en/p/servers-storage/servers/racks/thinksystem-sr665-v3/len21ts0009

Related product families

Product families related to this document are the following:

- 2-Socket Rack Servers
- Direct-Attached Storage
- Microsoft SQL Server
- TPC-E Benchmark Results
- ThinkSystem SR665 V3 Server

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